



U.S. Fish & Wildlife Service

Endangered Species Facts

Scaleshell Mussel

Leptodea leptodon

The scaleshell is a freshwater mussel that was listed in 2001 as an *endangered species* by the U.S. Fish & Wildlife Service.

Endangered species are animals and plants that are in danger of becoming extinct. *Threatened species* are animals and plants that are likely to become endangered in the foreseeable future.

Identifying, protecting, and restoring endangered and threatened species is the primary objective of the U.S. Fish and Wildlife Service's endangered species program.

What is a scaleshell mussel?

Appearance - The scaleshell is a relatively small freshwater mussel with a thin, fragile shell and faint green rays. It grows to about one to four inches in length. The inside of the shell is pinkish white or light purple and highly iridescent. The scaleshell gets its name from the scaly appearance of the shell, which is only seen in females.

Range - Scaleshell historically occurred across most of the eastern United States. During the last 50 years this species became increasingly rare within its reduced range. Of the 55 historical populations, 14 remain scattered within the Mississippi River basin in Arkansas, Missouri, and Oklahoma.

Habitat - Scaleshell live in medium-sized and large rivers with stable channels and good water quality. They bury themselves in sand and gravel on the bottom with only the edge of their partially-opened shells exposed. As river currents flow over them, they siphon particles out of the water for food such as plant debris, plankton, and

other microorganisms. The roles of scaleshell in river ecosystems are as food for wildlife like muskrats, otters, and raccoons and as filters which improve water quality.

Reproduction - The life cycle of the scaleshell, like most freshwater mussels, is unusual and complex. Their eggs develop into microscopic larvae (glochidia) within the gills of the female. The female discharges its glochidia into the river where they must attach to gills or fins of a fish to continue developing. Each mussel species has specific fish species (host fish) that are needed by the glochidia to develop. It appears that scaleshell be other species. Glochidia continue growing on the fish and transform into juveniles. After a few weeks, they drop off, land on the river bottom, and continue maturing into adults.

Why is the scaleshell mussel endangered?

Pollution - Adult mussels are easily harmed by toxins and

declines in water quality from pollution because they are sedentary (stay in one place). Pollution may come from specific, identifiable sources such as factories, sewage treatment plants and solid waste disposal sites or from diffuse sources like runoff from cultivated fields, pastures, cattle feedlots, poultry farms, mines, construction sites, private wastewater discharges, and road drainage. Contaminants reduce water quality and may directly kill mussels, reduce the ability of surviving mussels to have young, and/or result in poor health or disappearance of host fish.

Sedimentation - Sediment is material suspended in water that usually is moved as the result of erosion. Although sedimentation is a natural process, poor land use practices, dredging, impoundments, intensive timber harvesting, heavy recreational use, and other activities may accelerate erosion and increase sedimentation. A sudden or slow blanketing of the river bottom with sediment can



Photo by Dr. M.C. Barnhart